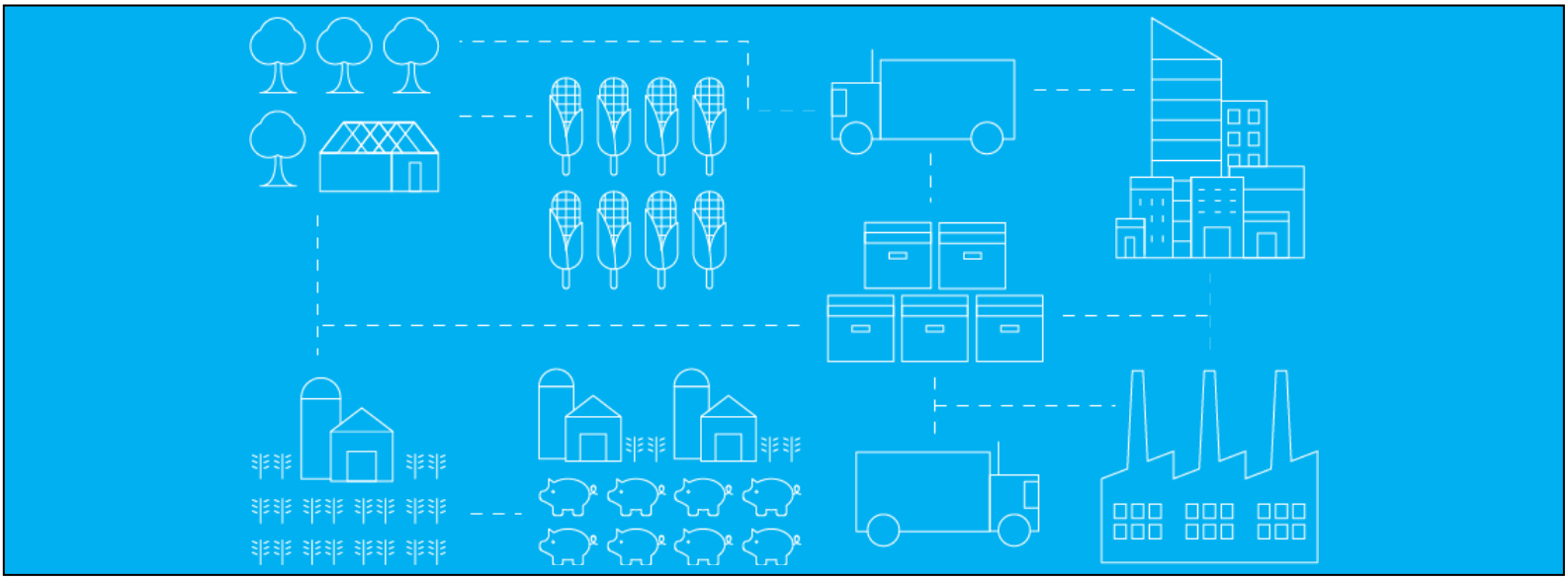
SEA NON-TECHNICAL SUMMARY

Department of Agriculture, Food and the Marine

September 2022



SEA NON-TECHNICAL SUMMARY

The Department of Agriculture, Food and Marine (DAFM) as the competent authority, has developed the Common Agricultural Policy Strategic Plan 2023-2027 (CSP). In accordance with the requirements of EU and national legislation on the assessment of the effects of certain plans and programmes on the environment a Strategic Environmental Assessment (SEA) has been prepared. This is the Non-Technical Summary of the SEA Environmental Report (SEA ER). The purpose of this environmental report is to:

- Inform the development of the draft CAP Strategic Plan 2023-2027;
- Identify describe and evaluate the likely significant effects of the draft CAP Strategic Plan 2023-2027 and its reasonable alternatives; and
- Provide an early opportunity for the statutory authorities and the public to offer views on any aspect of this environmental report and accompanying CAP Strategic Plan documentation, through consultation. This Environmental Report complies with the requirements of the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) as implemented in Ireland through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004), as amended, and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004), as amended.

The draft CAP Strategic Plan 2023-2027, SEA ER and Natura Impact Statement (NIS) were put on public display for the statutory consultation period from 8th November to 8th December 2021.

Additional mitigation measures have been included in the SEA ER and NIS on foot of submissions. These are presented in Section 9.2.1 of this SEA ER. A response to submissions relating to environmental issues and the SEA ER are presented in Annex B of the SEA ER.

A number of proposed changes to the draft CAP Strategic Plan were also made following the public consultation period, and these have been screened for significant environmental effects under the SEA Directive. This SEA Screening of proposed changes to the draft CAP Strategic Plan 2023-2027 is presented as Annex C to the SEA ER.

Following observations from the European Commission to Ireland on the draft CAP Strategic Plan 2023-2027, further changes were made by DAFM to the draft CAP Strategic Plan. These changes have been screened for significant environmental effects under the SEA Directive. This SEA Screening of proposed changes to the CAP Strategic Plan 2023-2027 is presented as Annex D to the SEA ER.

Summary of the CAP Strategic Plan 2023-2027

An overview of the CSP as presented in *Section 1 Strategic Statement* is presented below and is accompanied by a summary of the relevant sections of the plan that are identified for inclusion in the environmental assessments. The Regulation establishes that for the period to 2027, "*support from the European Agricultural Guarantee Fund (EAGF) and European Agricultural Fund for Rural Development (EAFRD) shall aim to further improve the sustainable development of farming, food and rural areas and shall contribute to achieving the following general objectives*".

TABLE 1 OVERVIEW OF CONTENTS OF CAP STRATEGIC PLAN 2023-2027

CAP Strategic Plan Section	Outline	Included in SEA Assessment
Section 1 Strategic Statement	*This section presents an overview of Ireland's CAP Strategic Plan outlining what the CAP will do. It focuses on the main expected achievements and interventions (including relevant elements of the green architecture) in light of the identified needs and summarise key choices on financial allocation. The statement should allow a non-specialist audience to understand the reasoning behind and links between the choices made by Ireland.*	*No, this is context for the CAP SP.*
Section 2. Assessment of Needs and Intervention Strategy	*This Needs Assessment, undertaken as part of the development of Ireland's CAP Strategic Plan 2023-2027 (CSP), aims to identify and prioritise the high-level needs of the Irish agri-food sector. The assessment is based on the evidence provided in Ireland's SWOT Analysis, feedback provided by stakeholders, and the recommendations provided by the European Commission with regards Ireland's CSP. Where a need will not be addressed by the CAP, this has been identified and alternative means of addressing the need (outside of the CAP budget) are included – this is also provided in Section 2.1.*	*No, this has provided background information.*
Section 3 Consistency of the Strategy	*For each topic, this section provides an overview of synergies and complementarities emerging from a combination of interventions and conditions set in the CAP Strategic Plan.*	*No*
Section 4: Elements common to several interventions	*Summary of on-farm practice/obligation; Territorial scope; Type of farmers concerned; Explanation of the contribution to achieve the main objective of the Good Agricultural and Environmental Conditions (GAEC) standard.*	*Yes, conditionality through the GAECs has been commented upon and assessed in the SEA and AA*
5.1 Direct Payments Interventions	*Basic income support for sustainability (BISS)* *Complementary income support for young farmers (CIS-YF)* *Complementary redistributive income support for sustainability (CRISS)* *Ecoscheme* *Protein Aid*	*Yes, landuse effects*
5.2 Sectoral Interventions	*Sectoral intervention for the apiculture sector* *Sectoral intervention in the fruit and vegetable sector*	*Yes*
5.3 Rural Development Interventions	*Agri Environment Climate Measures (AECM) : General and Co-operation Measures*	*Yes, landuse effects*

CAP Strategic Plan Section	Outline	Included in SEA Assessment
	Non-productive investments associated with agri-environment climate measure (name to inserted) *AECM Training* *On Farm Capital Investment Scheme (CIS)* *Collaborative Farming Grant* *Continued Professional Development for Advisors* *Dairy Beef Welfare Scheme* *European Innovation Partnerships* *Area of Natural Constraints* *Producer Organisations in the beef and sheep sectors* *Knowledge Transfer* *LEADER, referred to as community-led-local development in Article 25 of Regulation (EU)[CPR]* *Organic Farming Scheme* *Sheep Improvement Scheme* *Straw Incorporation Measure* *Suckler Carbon Efficiency Scheme* *Training to implement Suckler Carbon Efficiency Scheme*	
Section 6	*Targets and Financial Plans*	*No, where relevant this information has been used to inform the SEA Monitoring*
Section 7	*Governance systems and coordination systems*	*No*
Section 8	*Modernisation and simplification*	*No*
Annexes	*Include SEA and AA*	

SEA Scoping

The steps involved in SEA are as follows:

- Screening (determining whether or not SEA is required).
- Scoping (determining the range of environmental issues to be covered by the SEA).
- The preparation of an Environmental Report .
- The carrying out of consultations.
- The integration of environmental considerations into the Plan or Programme.
- The publication of information on the decision (SEA Statement).

Consultation as part of SEA Scoping was carried out with the statutory consultees for SEA in Ireland including statutory consultees in Northern Ireland; this also included the development of a Scoping Report. All of the environmental topics listed in the SEA Directive were scoped in for the assessment of the plan. The CAP Strategic Plan is a national plan, and the assessment has been focussed at the national level. The plan will cover the period from 2023 to 2027 and in line with the SEA Directive, short, medium and long-term impacts have been considered during the assessment. Based on the requirements of the legislation and guidance, the information provided in the Environmental Report is outlined in Table 2.

TABLE 2 REQUIREMENTS OF THE SEA DIRECTIVE AND RELEVANT SECTION IN ENVIRONMENTAL REPORT

Schedule 2B of Statutory Instrument 435 of 2004	Addressed in this SEA ER
a) an outline of the contents and main objectives of the plan and relationship with other relevant plans	Chapter One Introduction and Chapter Three: Methodology outlines contents and main objectives. Chapter Four details the relationship with other relevant plans
b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Chapter Five Baseline Environment provides this information
c) the environmental characteristics of areas likely to be significantly affected	Chapter Five Baseline Environment provides this information
d) any Issues and Threats problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or Habitats Directive	Chapter Five Baseline Environment provides this information
e) the environmental protection objectives, established at international, European Union or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation	Chapter Six SEA Objectives provides this information
f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors	Chapter Eight Significant Effects on the Environment provides this information
g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan	Chapter Nine Mitigation Measures provides this information
h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter Seven Alternatives Considered provides this information and difficulties encountered are listed at the end of Chapter Two, Baseline Environment.
i) a description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan	Chapter Ten Monitoring provides this information
j) a non-technical summary of the information provided under the above headings	This is provided as a separate document to this Environmental Report and is also available as part of Public Consultation.

Appropriate Assessment

In parallel to the SEA, an Appropriate Assessment (AA) was being carried out to inform decisions surrounding likely significant effects on habitats and species listed in the EU Habitats Directive. Screening for Appropriate Assessment was carried out by the DAFM as the competent authority, and a decision was made to carry out a full AA on the draft CAP Strategic Plan 2023-2027; this is presented under a separate report -a Natura Impact Statement (NIS).

Relationship to other plans, programmes and policies.

The approach taken is to review the environmental protection objectives and environmental policy commitments from **relevant** key plans, programmes and policies as they apply to the CAP Strategic Plan 2023-2027. The SEA Scoping process further informed and refined the list of relevant plans and programmes and where consultees identified a relevant plan/programme, this is listed in the footnote. A full list of relevant plans and programmes are provided in Appendix A. Figure 1 shows the relevant EU Directives.

FIGURE 1: EU DIRECTIVES

Relevant Aspects of Current State of the Environment

The purpose of this section is to present significant baseline description of the environment and by highlighting significant environmental problems relevant to the plan area, help inform and refine interventions in the CAP Strategic Plan that can address these problems. For identification of opportunities and strengths identified during the preparation of the CAP Strategic Plan, please read the Section 2 of the CAP Strategic Plan which presents this information in some detail. This chapter presents this information and has been informed by the SEA Scoping process including data identified by consultees, as appropriate and relevant to the CAP Strategic Plan. The baseline is structured as follows:

- Population and Human Health
- Biodiversity, Flora and Fauna
- Climatic Factors and Air Quality
- Soil, Geology and Landuse
- Water Resources
- Landscape
- Cultural heritage including archaeological and architectural heritage
- Material Assets
- Inter-relationships of the above.

State of the Environment Overview –Ireland

The SWOT analysis demonstrated the huge pressure that agriculture is placing on Ireland's natural resources and noted that the increase in intensive farming systems in Ireland is placing increasing pressure on these resources. The EPA review of Ireland's Environment (2020) provides key trends across a number of landuse activities, including agriculture.

Key Trends EPA 2020 Agriculture

Chapter 13 specifically addresses Environment and Agriculture[1], and this is summarised below. The agri-food sector is Ireland's oldest indigenous industry and continues to play a vital role in Ireland's economy, as well as shaping its landscape and environment.

- Ireland's weather and changing climate are key issues for the agricultural sector.
- Farms in Ireland vary in size and production type, covering almost 68 per cent of the country's land area, with most farmers involved in livestock farming. Land cover data from 2018 (Chapter 5) show that, of Ireland's 7.04 million hectares, 4.76 million hectares is used for agriculture (67.6% of the land area) and 672,085 hectares is used for forestry (9.5% of the land area).
- Economic Situation Farm type, market volatility, weather conditions, increased production costs and direct payments all contribute to different and changing farm incomes.
- The significant pressures on the environment because of the economic resurgence of the agriculture sector after the economic crash needs to be addressed urgently.
- On-farm agricultural practices accounted for 35.3 per cent of national total greenhouse gas emissions in 2019, with emissions mainly consisting of methane and nitrous oxide.
- The agriculture sector is almost exclusively responsible for the largest source of ammonia emissions in Ireland, accounting for 99 per cent of the national total in 2019. Significant implementation of on-farm abatement measures is needed to bring Ireland back into compliance with the current national emission ceiling and to meet the 2030 emission ceiling for this air pollutant.
- Changes in and intensification of agricultural practices have impacted on biodiversity. There are, however, locally led projects funded under the current CAP and nationally that the sector could learn from, in which farmers are working to restore specific habitats and conserve species on their farms.
- Nutrient pollution (caused by too much nitrogen and phosphorus in our waters) is the key water quality issue impacting on our rivers, lakes and estuaries.
- Protecting drinking water sources from the pesticide MCPA and slurry spreading are important public health issues in Ireland.
- There have been significant improvements in soil pH status in recent years, reversing past trends. Continued emphasis on lime application is required to improve nutrient use efficiency.

[1] Environmental Protection Agency – Ireland's Environment – An Integrated Assessment 2020 – Environment and Agriculture (epa.ie)

State of the Environment Northern Ireland

The Northern Ireland Environmental Statistics Report 2021 presents the latest data in relation to key trends in Northern Ireland[2]. Key trends relating to agricultural activity are presented below:

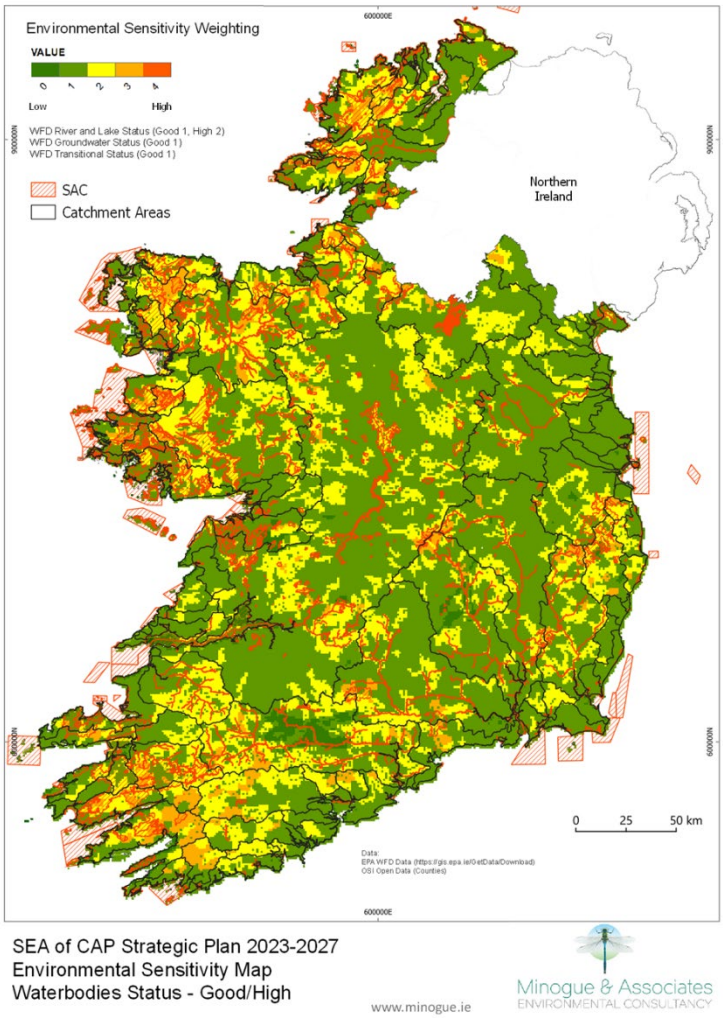
- Agriculture, transport and energy supply were the largest contributing sectors to greenhouse gas emissions in Northern Ireland in 2018. The largest sectors in terms of emissions in 2018 were agriculture (27%), transport (23%) and energy supply (15%). Most sectors showed a decreasing trend since the base year.
- In 2019, of the ammonia emissions from agriculture, 88 per cent came from livestock, 8 per cent came from the application of fertilisers containing nitrogen and 4% from the application of other organic materials to land (sewage sludge and digestate).
- Cattle numbers have declined to a lesser extent in NI compared with the UK as a whole. Dairy cow numbers have also increased in NI. Pig and poultry numbers have increased over this period in NI in contrast to decreasing or stable populations for the UK as a whole. The ammonia emissions from nitrogen fertilisers have declined by 0.6 kilotonnes (from 3.3kt in 2001 to 2.6kt in 2017), an 18.9% decrease. This is directly associated with a significant reduction in fertiliser use, particularly on grassland. Overall, ammonia emissions have increased, by 8.5%, from 29.3kt in 2001 to 31.8kt in 2019.
- The introduction of The Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006 has contributed to a reduction in phosphorus from agricultural activities, in conjunction with ongoing improvements in domestic wastewater treatment through investment by Northern Ireland Water. From the low of 0.047 mg/l reported in 2012, levels of soluble reactive phosphorus in the 93 Surveillance Rivers have increased to 0.067 mg/l in 2020.
- Marine nutrients are one of the key environmental variables controlling the growth of phytoplankton in coastal waters. In temperate regions, coastal waters nutrient concentrations are highest in winter, when agricultural run-off is highest due to increased rainfall, and algal growth is lowest due to lack of light and lower temperatures. Excessive levels of marine nutrients can lead to local imbalances of marine phytoplankton (planktonic blooms) and macroalgae (seaweeds) a process known as eutrophication. Local effects can include impacts on the dissolved oxygen concentrations of the water column which can lead to fish kills and the localised smothering of other marine macroalgae and animals, particularly in intertidal areas.
- Scheduled monument consent must be sought for proposed works which may alter or disturb the fabric of a scheduled historic monument, or its ground surface. Scheduled historic monuments are predominantly located in rural areas and most owners tend to come from within the agricultural sector. Application numbers increased in 2018/19 and reached 97 in 2019/20, the highest number presented in the time series above. An increase in government and local council projects, such as trails and site infrastructure, to aid well-being and tourism activities is one reason for this increase.

Inter-relationships

In accordance with the SEA Directive, the interrelationship between the SEA environmental topics must be taken into account. One means to present this is to prepare an overall environmental sensitivity map that aggregates environmental topics. The following map shows this information by combining water bodies at good or high status, with Special Areas of Conservation. The Water Framework Directive catchments are also shown as regional boundaries.

[2] Northern Ireland Environmental Statistics Report 2021 presents the latest data in relation to key trends in Northern Ireland . | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk)

FIGURE 2: ENVIRONMENTAL SENSITIVITY MAPPING TO SHOW INTER -RELATIONSHIPS



Likely evolution in the absence of the plan

The SEA legislation requires that consideration is given to the likely evolution of the current baseline where implementation of the CAP Strategic Plan 2023-2027 does not occur. does not take place. Similarly, the 11 EU directives listed in the Water Framework Directive would still need to be implemented fully even without the River Basement Management Plan. Table 3 summarises the key points.

TABLE 3 EVOLUTION OF THE ENVIRONMENT IN THE ABSENCE OF THE CAP STRATEGIC PLAN 2023-2027

SEA topic	Evolution of same
Biodiversity, Flora and Fauna	Flora and fauna, habitats and ecological connectivity would be protected under existing provisions at legal and policy level. The evolution of biodiversity and fauna would be dependent on the rate and extent of any such agricultural developments which would take place. There would be limited considerations of the inter-connections between such issues including water quality, water dependent habitats, species decline and loss with changing and loss of landscape features. No provisions made to contend with future climate change. Developments along or adjacent to the banks or rivers in the absence of measures relating to buffer zones could result in a reduction in ecological connectivity within and between a number of habitats. Pollution of water bodies as a result of any future agricultural activities along river catchments would likely to adversely impact aquatic biodiversity and flora and fauna including salmonid species and other species protected under Annex II of the Habitats Directive. The ongoing severe decline of farmland birds and waders associated with the agricultural landscape and habitat features would persist. Likewise, the ongoing decline of pollinators with no interventions to address herbicide, pesticide use and nutrient management.
Population, Human health	Core issues including farm viability, land transfer, generational renewal with support for younger and female farmers would not be addressed in the absence of the plan. The rural development programme would not be integrated to the overall CAP Strategic Plan with the accompanying measures addressing rural diversification, etc. In combination effects relating to human health and air quality, water quality and climate change would not be availed of.
Air Quality and Climate	In the absence of the CAP SP, there may be fewer opportunities to support GHG emissions associated with the interventions. The realisation of objectives relating to energy efficiency, renewable energy and critically the urgent need to reduce GHG emissions may not be achieved though clearly this SEA parameter will interact with the achievement of other plans and targets including Ag Climatise, Foodwise 2030 and sectoral targets. Addressing air quality in particular ammonia emissions and local emissions arising from agricultural activities would not be maximised and addressed.
Water Resources including flood risk	Addressing issues from source and diffuse pollution associated with nutrient management in particular may be not supported in the absence of the plan. Supporting softer interventions such as buffer and riparian zones may not be supported. The draining and filling of wetlands may continue with significant adverse in combination effects across a number of other topics such as biodiversity and flora and fauna, soil, human health.
Soil and Geology	There would be no framework for the provision of measures relating to improving soil organic matter, conservation of soils, identification, and management of peat soils in the absence of the plan. subsequent impacts not only on soil quality, but on biodiversity, groundwater quality and water supply and consequently potential impacts on public health.
Material Assets	Existing objectives that relate to this parameter would apply. The current legislation which provides for the protection and enhancement of the water resources and quality at European, National, Regional and County level will protect and maintain existing water bodies in the Plan area. However, there would not be a targeted framework to regulate aid and control agricultural landuse effects t in accordance with specific local issues. This could result in significant impacts across a range of environmental parameters including biodiversity, water, human health, landscape and soil and geology.

SEA topic	Evolution of same
Landscape	Agricultural developments would be assessed under the planning and development statutory framework. However, there would be no targeted support for agricultural landscape elements already in the countryside such as farm buildings etc. in combination effects would continue relating to the interaction of landuse, agricultural activities and parameters such as soil, water and biodiversity. In the absence of a plan, this would remove this protection and enhancement measures for the landscape, potentially leading to its fragmentation, loss and deterioration.
Cultural Heritage	Legislation and guidance from international and national level affording both the architectural and archaeological elements a high level of protection. However, intangible cultural heritage and vernacular features which are not protected could continue to be lost through loss of boundaries (stone walls, hedgerows), gates, posts etc. The potential setting of archaeological sites may in combination be adversely affected.
Inter-relationships	The potential for in combination effects arising due to the absence of the plan would be potentially significant. Evolution of the environment in the absence of the plan could generate effects in terms of loss of ecological connectivity and non-designated habitats. Disturbance and significant ongoing negative effects to biodiversity, flora and fauna through absence of controls, cross compliance and absence of targeted interventions. Effects of climate change on agricultural activities, combined with loss of opportunity to adapt and embed nature-based solutions and strengthening the green and blue network and ecological corridors. Risk of not contributing to reduction in carbon emissions. Potential adverse effects on water quality for estuarine, freshwater and groundwater with accompanying interactions across all SEA parameters.

Strategic Environmental Objectives

The purpose of the SEA Objectives (SEOs) is to ensure that the assessment process is transparent, robust and that the draft CAP Strategic Plan considers, identifies and addresses potential significant environmental effects. **Table 4** below presents the SEOs that have been developed to test and assess the potential environmental effects of the draft CAP Strategic Plan. Following the SEA Scoping consultation process the SEOs were amended to reflect submissions by consultees as appropriate to the scope of the SEA and a footnote below each amendment shows where and what was amended.

TABLE 4 STRATEGIC ENVIRONMENTAL OBJECTIVES

SEA topic	Objective	Sub-questions- will the CAP STRATEGIC PLAN?
Biodiversity, Flora and Fauna (BFF)	Contribute to and maximise the protection and restoration of biodiversity and ecosystem services in the wider countryside[3] Contribute to the protection and restoration of European Sites and nationally designated sites (e.g. NHAs/pNHAs)	Maintain and enhance internationally and nationally designated sites, specifically SPAs, SACs, Ramsar sites and Natural Heritage Areas? Maintain and restore habitats, species and sites? Encourage uptake of biodiversity measures? Prevent, minimise or control the spread of invasive species? Maintain and improve ecosystem services and ecological networks in the wider countryside? Reverse the decline of pollinators? Reduce and achieve ammonia emissions in line with NEC thresholds? Will the draft cap strategic plan 2023-2027 reverse the decline of farmland and upland birds?[4]
Population and human health (PHH)	Maximise, support and promote sustainable agricultural landuse and support long term viability of farms [2], Contribute to improving health and quality of life for farming communities and wider rural community	Support and enhance sustainable agricultural practices in appropriate locations? Result in nature rich green spaces – linked to improved health and wellbeing? Support sustainable farm incomes? Encourage younger farmers participation? Reduce health risks associated with farm activities? Reduce local adverse impacts from agricultural activities on rural community including towns and villages?[5]
Soil and Geology (SG)	Maximise, protect and enhance soil quality whilst recognising the soil carbon function soils under agricultural landuse Contribute to the protection, conservation and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites	Safeguard and improve the highest quality soil and agricultural land? Reduce soil pollution, degradation, and erosion? Increased uptake of sustainable management of soil resources and fertility? Increase agricultural practices that increase carbon capture in soils? Reduce the use of inorganic nitrogen fertiliser?
Water Resources (W)	Maximise the protection and enhancement of the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic	Protect water resources from pollution, particulate nitrate and phosphorous pollution with no further deterioration; reverse decline of water quality status associated with agricultural activities?
		Support the Water Framework Directive achievement of good ecological status by 2027?
		Protect and improve the quality of transitional and coastal/marine waters?

[3] source Biodiversity Action Plan for Ireland 2017-2023
[4] SEA Scoping submission Birdwatch Ireland.
[5] SEA Scoping submission EPA

SEA topic	Objective	Sub-questions- will the CAP STRATEGIC PLAN?
	ecosystem (quality, level, flow).	Minimise exposure to flood risk in line with the EU Floods Directive, Recognise function of flooding in maintenance of important ecosystems and role of nature based solution?
		Protect and improve drinking water sources as required under the water framework directive and recast drinking water directive?
Climate Change (CC)	Reduce Greenhouse Gas emissions from the agricultural sector in line with national commitments	Support the agricultural sector in reducing its absolute GHG emissions? Will the draft CAP Strategic Plan 2023-2027' cut greenhouse gas emissions from agriculture to meet the Paris agreement? Improve the climate change resilience and adaption capacity of the sector? Support land management practices that protect and capture carbon, particularly from peatlands and grasslands? Support policies that maintain/increase the area of tillage land in line with Ag Climatise objectives? Invest in research to provide new mitigation measures for Irish food systems? Reduce the use of chemical nitrogen use in Irish Agriculture to reduce Green House Gas Emissions? Reduce ammonia emissions from the agricultural sector in line with the Ag Climatise roadmap to meet the ceilings set down in EU legislation?
Air Quality (AQ)	To avoid, prevent or reduce harmful effects on human health and the environmental resulting from emissions to air.	Reduce ammonia (NH3) emissions from agriculture to meet achieve EU Thresholds? Support Ireland in its requirement to achieve the National Emissions Ceiling Directive Thresholds for Nitrogen Dioxide (NOx), Sulphur Dioxide (SO2), Non-Methane Volatile Organic Compounds (NMVOC) NOx and PM levels under ambient air quality legislation.
Landscape (L)	Contribute to the conservation, protection, enhancement and manage the character and quality of Ireland's distinctive landscape and seascape	Enhance and maintain key agricultural features of the landscape? Recognise the local and regional diversity of landscape character and support retention of same? Support and promote the integration of new farm buildings sensitive to into local landscapes character through appropriate design, siting and screening[6].
Cultural Heritage (CH)	Contribute to the protection, enhancement, and management of Ireland's rich archaeological and cultural heritage as well as vernacular and traditional farm buildings and features	Safeguard and support the protection of archaeological sites, field monuments and cultural heritage? Support and maintain vernacular farm buildings? Support the reuse for sustainability and adaption of farm buildings? Support the upskilling or retraining in traditional farm practices and traditional building skills[7]?
Material Assets (MA)	Conserve natural resources, reduce waste production through the circular economy and promote efficient use of transport, grid and energy network as applied to agriculture and the CAP Strategic Plan	Safeguard natural resources and minimise unsustainable use? Reduce hazardous waste, increase recycling rates and re-use of materials through circular economy measures? Promote and support on farm sustainability through energy efficient methods (smart farming)?[8]

[6] SEA Scoping submission DAERA
[7] SEA Scoping Submission DAERA
[8] SEA Scoping Submission EPA

SEA topic	Objective	Sub-questions- will the CAP STRATEGIC PLAN?
Natural capital and ecosystem services (Inter-relationships = IR)	Recognise and maintain the ecosystems functions of habitats in and around the plan area and promote nature-based solutions to climate change mitigation and adaptation through CAP measures.	Plan for and support landscape scale responses to climate change adaptation? Maintain and Enhance ecosystem services? [9]

Consideration of Alternatives

The approach to the consideration of alternatives in the SEA has followed the *Developing and Assessing Alternatives in Strategic Environmental Assessment*[10]. Through the Scoping stage, both in Scoping workshops and formal consultation on the Draft Scoping Report (15th February 2021 to 13th April 2021) consultees were asked to comment on the proposed approach to the Alternatives and the suggested used of the CAP General and Specific Objectives as a means to develop reasonable alternatives. At SEA Scoping stage it was proposed to frame each alternative under the three General and Specific Objectives; however, feedback and the plan iteration process led to a different approach whereby the EU recommendations (under the General and specific objectives) were used as a means to consider the alternatives.

The following table presents the initial alternatives brought forward for assessment.

[9] SEA Scoping submission recommendation An Claiomh Glas

[10] Guidance on Developing and Assessing Alternatives in Strategic Environmental Assessment (EPA 2015[10]).

TABLE 5 EU COMMISSION RECOMMENDATIONS TO IRELAND IN CAP STRATEGIC PLAN PREPARATION

General Objective	Recommendation	Strategic Alternatives
General Objective 1: Foster a smart, resilient and diversified agricultural sector ensuring food security	1.a. Support farmers in capturing higher share in the value chain by assisting innovation and diversification of products and markets (ranging from exports to local and agro-tourism), investments in quality aspects (including environmental labelling, EU and other quality schemes, organic farming) and by encouraging the recognition of Producer Organisations as well as the formation of new ones where relevant. 1.b Support the ability of Irish farmers to invest in sustainable practices, by improving access to finance, including through supporting new or improved financial instruments. 1.c Improve the viability of farms, specially medium-sized farms and farms in areas facing natural constraints by increasing the fairness and the efficiency of income support, in particular via internal convergence and by applying, for example, the complementary redistributive income support for sustainability and the reduction of payments. 2.g Improve the resilience of the farming sector to climate risks such as water stress on grassland and fodder crops - for example, by supporting partnerships between livestock and arable farms and the creation of fodder reserves.	Alternative 1A. Generational Renewal, support for young and women farmers and producer organisations. Alternative 1B Generational renewal , support for young and women farmers with focus on training, capacity and smart farming.
General Objective 2: Bolster environmental care and climate action and to contribute to the environmental and climate-related objectives of the Union	2.a. Encourage a general move towards more sustainable farming practices by improving the environmental and climate-related performance of income support – through appropriate requirements and schemes, including support for carbon farming. 2.b Ensure a widespread improvement in nutrient management, thereby helping to achieve the Green Deal target on reducing nutrient losses (as well as other targets and objectives, as indicated in section 1.2 above) – through optimised fertilisation (and potentially limited fertilisation in some cases), improved manure management and a wider transition to precision farming. Appropriate design of elements of conditionality will be essential in achieving these shifts (especially to ensure action in hotspots), and funded support schemes may also be needed. Encourage improvements to the efficiency of enteric fermentation in farmed livestock in line with the Methane Strategy, including through support for advice, innovation and management practices, as appropriate. 2.d Step up efforts to encourage tree-planting in various configurations – including agro-forestry systems – and with species mixes which are appropriate in terms of biodiversity, adaptation to climate change, carbon sink capacity and resistance to pests and diseases. Support may be necessary not only for afforestation but also for advice on species selection and on effectively integrating woodland into farm management. 2.e Make significant efforts to increase the area farmed organically - thereby helping to achieve the Green Deal target on organic farming (as well as other targets and objectives). Support for conversion to and maintenance of organic farming may be appropriate, but steps to develop the market (whether supported through the CAP or not) may also be needed. 2.g Improve the resilience of the farming sector to climate risks such as water stress on grassland and fodder crops - for example, by supporting partnerships between livestock and arable farms and the creation of fodder reserves.	Alternative 2A: Organic farming from the current rate of under 2% to the government commitment of 7.5 %. Alternative 2B: Organic farming, agro forestry and support for extensive farming .

General Objective	Recommendation	Strategic Alternatives
General Objective: 3 Strengthen the socio-economic fabric of rural areas and address societal demands	3.a Improve animal health and welfare in line with consumer expectations, by putting in place more ambitious measures to support farmers to improve livestock management practices, especially for pigs and male dairy calves. 3.b Contribute to the Green Deal target on reducing the use and risk of pesticides via schemes fostering a switch to sustainable farming practices (including integrated pest management). 3.c Continue improving access to land and finance for young farmers and new entrants, including by targeting inheritance constrains and supporting cooperation between farmer generations. 3.d Increase social inclusion in rural communities by supporting improvements in basic services and their accessibility. In doing so it will be important to ensure synergies with other EU and national funds. 3.e Develop the bioeconomy by supporting renewable energy production from agriculture and forestry as well as supporting diversification into other non-food areas.	Alternative 3A: Support for diversification of rural economy by supporting higher value local food production, promotion of local landscape related products, agro tourism, bio economy. Alternative 3B: Support for essential services in rural towns and villages to act as service centres to rural areas, bioeconomy measures and support through renewable energy production (farm solar, wind energy, forestry/timber products) .
Cross cutting Objective:	Fostering and sharing of knowledge, innovation and digitalisation in agriculture and rural areas, and encouraging their uptake. Support further integration of the Agricultural Knowledge and Innovation System, strengthening links between research, advisors, education, the farming community and interactive innovation projects, in particular organise innovation support services, support peer-to-peer learning and dissemination to all Irish advisors. This would apply to all alternatives to a greater /lesser extent.	Alternative 4 Continuation of measures. Continuation of measures under the current CAP Strategic Plan and Rural Development Programme with revisions/updates to reflect national policy and legislative changes.
.		
This applies to all alternatives other than Alternative 4. As can be seen above, the highest number of recommendations relating to Objective 2: Bolster environmental care and climate action and to contribute to the environmental and climate-related objectives of the Union.		

Preferred Alternative

Thereafter, a number of refined alternatives were explored. Following this, an emerging preferred alternative was identified. In order to positively respond to all EU Recommendations and tailor them to the Irish context some key measures were required as follows:

- Improved Conditionality – eligible land, nutrient management, extensive farming
- Farm viability and income support redistributed.
- Tailored, targeted responses for habitats such as peats and grasslands
- Wider and cross-cutting improvement in overall nutrient management
- GHG emissions and in enteric methane reductions
- Knowledge sharing, capacity building and technical skills

Thus, the preferred alternative that encompasses all of the EU recommendations is preferred from the SEA perspective as it provides the greatest and widest environmental effects; improves farm viability and improves technical understanding and knowledge sharing. As reflected in the River Basin Management Plan 2022-2027 (Draft) the need to underpin the preferred alternative by providing the right measure in the right place supporting by extensive informed advice and capacity building is essential to improving overall environmental performance of the preferred alternative. Additional mitigation measures are recommended through the SEA and AA processes to reduce the risk of these potentially negative environmental effects. These are presented in Chapter Nine of the SEA ER.

Summary of Assessment

Table 6 summarises the draft CSP measures and presents an overview of the environmental assessment of the draft CSP measures. The measures proposed have been assessed in detail in Chapter 8 of the main Environmental Report. Note: no recommendation or changes are permitted under the CAP Regulations to the Statutory Monitoring Requirements (SMRs) so these are not within the scope of the SEA.

TABLE 6 SUMMARY OF ASSESSMENT

Plan Element	Summary	Mitigation / Recommendations
Good Agricultural Environmental Conditions	In tandem and in combination the GAECs should result in positive environmental effects subject also to the recommended SEA and AA mitigation measures identified that can be delivered through interventions also such as Ecoscheme, AECM and AKIS training. Key to the success of the GAECs from an environmental perspective and in particular to address critical, significant environmental problems relating to biodiversity, water and climate is the need to ensure full and comprehensive monitoring, delivery and implementation on the ground at farm level as is required under the EU legislative framework for the CAP Strategic Plan.	Yes
Pillar 1 Interventions		

Plan Element	Summary	Mitigation / Recommendations
Basic Income support for sustainability (BISS) and Complementary income support for young farmers (CIS-YF)	As all farmers applying for CAP will be required to meet the requirements of BISS and CIS-YF subject to full adherence and implementation at national level this should at strategic level be positive for a number of SEOS including some BFF, W, SG, W, CH and resource use under MA. However, for sub questions under the SEA parameters the impact is currently uncertain on a number of SEOs, for example the issue of ammonia emissions and potential effects on BFF, in particular peatland habitats. The same possible issue arises in relation to ammonia emissions arising from application of fertiliser, though better, target cross referencing at farm level and full adherence to buffers under GAEC 3 should support and strengthen this. An uncertain effect also relates to the controls that may be included in the 5th NAP with uncertain effects identified in relation to W, SG SEOs. A further uncertainty relates to the sectoral targets under the Climate Action Plan. As a consequence, uncertain effects and positive effects are identified in terms of inter-related effects for example between ammonia, sensitive habitats, air quality, human health and water.	Yes
Ecoscheme	5 agricultural practices are provided for under the ecoscheme. These include extension of non-productive areas and landscape features to native tree planting and limiting chemical nitrogen usage. At strategic level these measures are positive for many SEOs with some uncertain effects relating to the Nitrates Action Programme and critically levels of uptake and where measures are applied.	Yes
Complementary redistributive income support for sustainability (CRISS)	The purpose of this is to rebalance payments towards small-medium farms. The direct payments are an important income support for all farmers and in particular for small and medium farms. The potential loss of this income could also contribute to farmers leaving farming and conversion or abandonment of farmland. The impact of this measure should give rise to positive and in combination effects across all the PHH SEOs and in turn, given that there is a spatial correlation between farms less than 30 hectares, ie: farms in the southern and eastern region are 41.3% larger than those in the North- West and Midwest region. This intervention may also support income security to farms located in areas of high value nature farmland which is present in higher density in the BMW region. The implications for rural economy, agricultural production and more generally maintenance of the agricultural landscape is positive.	No
Protein Aid	This is positive across all SEOs as it aims to increase security around protein food at national level. The most commonly used high protein source in Irish feed mills is various forms of soya (up to 47% crude protein content). Ireland's Roadmap towards Climate Neutrality – Ag Climatise recognises the importance of supporting native grown legumes for the livestock industry. This in turn reduced energy costs arising from transport and production especially around soya production with transboundary effects relating to loss of habitat for soya production in South America and the GHG emissions associated with importing from large distances. Protein crops provide an essential protein source for animal feed free from GMOs, thus underpinning the security of food production in the sector Protein crops serve as a very valuable break crop in tillage crop rotations. Legumes play an important role in fixing nitrogen from the atmosphere resulting in reduced chemical nitrogen fertiliser usage. This is consistent with the Farm to Fork strategy which targets reduction in fertiliser usage by 2030	No
Sectoral Interventions		

Plan Element	Summary	Mitigation / Recommendations
Sectoral Intervention for the Apiculture sector	Intervention to support research no direct landuse effects identified. Indirect positive for BFF and PHH SEOs.	No
Sectoral Intervention for Fruit and Vegetable sector	This measure relates primarily to co-ordination and support for producer organisation in Ireland and by strengthening the fruit and vegetable provisions in the country. No specific direct landuse effects identified, but indirect positive effects around PHH SEOs relating to improved pricing and support for fruit and vegetable suppliers	No
Pillar II Interventions		
AECM	The overall principal of these AECM scheme is positive at strategic level however reflecting the persistent issue of the right measure in the right place it is recommended that the actions under each Tier are properly considered to avoid inadvertent or indirect negative effects that result in poor outcomes for SEOS in particular habitats and species.	Yes
Cooperation Projects	At Strategic level the elements of this intervention seeks to mainstream the design of EIPs that have been positive and successful environmentally, through awareness raising and communication with farmers and a deeper understanding and appreciation of the right measure in the right place. The Cooperation option will only be offered to farmers whose farm area is located within a defined target area(s). This option will focus on implementing a higher level of environmental ambition on High Nature Value farmland areas, the maintenance of High Status Water Bodies and the achievement of national biodiversity targets with co-benefits for climate and water, using, where appropriate, results based models, supplemented by non-productive investments (Art. 68) and delivered by Local Project Teams under Art 71 of the CSP Regulation (Cooperation). This targeting of key areas and themes is positive across all SEOs and reflects measures that could provide multiple and co benefits across SEOs. The design of this intervention is positive as it aims to address a number of environmental challenges through its design. As the CSP outlined in action 1 the provision of core specialist advisers including ecologists, hydrologists and archaeologist will provide local or tailored information and advice in conjunction with state agencies and NGOs to design appropriate responses.	No
Non-productive investments associated with agri-environment climate measure	Positive effects across all SEOs further detail should be provided regarding hedgerow measures e.g.: -training relating to management outside bird nesting seasons etc. Similarly training relating to the positioning of barn owl boxes – in line with court of auditors and review of GLAS - these measures need to be full informed and the farmer understand the methods and application of methods are rolled out correctly otherwise a risk is that these measures result in adverse environmental effects and damage to features such as hedgerows.	No. addressed in capacity and knowledge sharing
AECM Training	No direct landuse effect as relating to training	Yes

Plan Element	Summary	Mitigation / Recommendations
Capital Investment Scheme	This is a significant measure that can give rise to landuse effects that may be positive or negative. Where planning permission is required proof of same is required in advance of grant being provided. Some measures such as health and safety, additional support to organic farmers and support for energy and water efficiencies are positive across SEOs such as MA, PHH, AQ, CC. The capacity of local authorities to undertake and request Appropriate Assessment screenings is an area of concern and in this regard the recommendation from the draft River Basin Management Plan will be important: Action: Carry out a review of Local Authority Resources to put in place appropriate resources to support individual local authorities in fulfilling their role in water quality protection and restoration.	Yes
Collaborative Farming Grant	This scheme is a further development of the current Collaborative Farming Grant and provides a parallel complementary support for older farmers to access a similar type of support to encourage succession planning and facilitate generational renewal. No landuse effects but positive for some PHH SEOs.	No
CPD for Advisors	Although no direct landuse effects are identified as this relates to training it is positive indirectly across all SEOs that the skills set listed addresses many environmental parameters.	Yes
Dairy Beef Welfare scheme	Whilst the objective of this measure relates to less time/shorter time required from birth to killing and accompanying reductions in food requirements, energy costs and GHG emissions it is unclear how effective at national scale this will be. Therefore, uncertain are identified in relation to this. Should this intervention continue to support the trend of increasing cattle numbers this will give rise to adverse effects on CC, AQ, W with in combination and cumulative effects across all other SEOs. The improvement of animal welfare measures is a positive element and objective of this scheme. Interactions regarding forthcoming sectoral targets for Climate Change give rise to uncertain effects consequently	Overarching Mitigation Measure 2
European Innovation Partnerships	The success of EIPs has been reviewed, researched and confirmed particularly for the environmental related EIPs and the tailoring to specific conditions and measures based on sound evidence base, along with the peer to peer element of these EIPS contribute to their success. Overall positive interactions across all SEOs. For some of the EIPs climate change and extreme weather events can affect seasonal success and continued predation of, for instance, ground nesting birds. The potential for cross border EIPS would be very supportive in addressing potential transboundary effects across SEOs such as W, BFF, AQ, L and CH.	No

Plan Element	Summary	Mitigation / Recommendations
Areas of Natural Constraints	By encouraging continued use of agricultural land, contribute to maintaining the countryside as well as to maintaining and promoting sustainable farming systems. High Nature Value (HNV) farming occurs most frequently in areas that are mountainous; or in areas where natural constraints prevent intensification and that grazing on these agricultural areas can be an important component of maintaining certain habitats. ANC compensates farmers for continuing to farm this mostly High Nature Farming land. Conservation and environmental objectives are incorporated into the scheme. For example, if a lower minimum stocking rate applies (e.g. 0.1 livestock per ha due to participation in a Commonage Management Plan), the lower stocking then becomes the eligibility requirement instead of the standard 0.15 livestock unit per hectare. The intervention aims to support farming in these areas and positive effects are identified in relation to PHH, BFF and across all SEOs.	No
Producer Organisations in Beef and sectors	As this relates to administrative support for POs in sheep and beef sectors, no direct landuse effects are identified.	No
Knowledge Transfer	No landuse effects identified, but indirect positive effects across all SEOs subject to core environmental components forming part of the Knowledge Transfer and collaboration with researchers and other bodies.	No
LEADER	At strategic level these themes are positive and it is important for LEADER companies to have access to or employ specialist to advice in these technical areas to ensure maximum benefits and robust project that delivery on these themes particularly around climate change capacity building, mitigation and sustainable development of the rural environment. Positive interactions for PHHs relating to rural viability, renewal but uncertain for other parameters subject to Local Development Strategies developed. However, this uncertainty should be addressed through development management by local authorities where planning consent is required and the measure that a designated expert sign off on approved works. In this instance this measure then offers significant in combination positive interactions with AQ, W, L, CH and MA SEOs given the thematic focus on rural environment and climate change as well as capacity building for same.	No
Organic Farming	Overall positive and will contribute towards increasing % of organic land to 7.5% and contribute towards the Farm to Fork and Green New Deal targets from which Ireland is currently at an extremely low base. The overall objective of the Organic Farming Scheme is to deliver enhanced environmental and animal welfare benefits and to encourage producers to respond to the market demand for organically produced food. The general structure and implementation/administration of the existing Organic Farming Scheme (RDP 2014-2020) will be continued, which entails an annual area-based payment over a maximum contract period of 5 years with increased payment per hectare and some targeted incentives aimed at areas that are deemed to be in deficit. It is proposed that the Organic Farming Scheme would open in tranches for applications on an annual basis throughout the CAP programming period.	No
Sheep improvement scheme	This relates to support for sheep welfare measures no direct landuse effects identified.	No

Plan Element	Summary	Mitigation / Recommendations
Straw Incorporation Measure	Reuse and recycle repurpose so circular economy aspect to this. This will sequester carbon in tillage soils, thereby reducing GHG emissions. The incorporation of straw will also have positive impact on soil biology and soil workability. This will further improve the environmental sustainability of the tillage sector. The Teagasc Marginal Abatement Cost Curve identifies such straw incorporation as an action that can contribute to carbon sequestration. The action of chopping and incorporating straw is required to be carried out in the year of application. Positive effects in relation to SG, CC, AQ and MA SEOs in particular. No interactions with other SEOs at strategic level.	No
Suckler Carbon Efficiency Programme	Finetuning and improving efficiency of suckler cattle should improve efficiency in terms of GHG emissions. This could be combined with other measures such as those in AECM and Ecoscheme which in combination could contribute to maintaining or increasing soil organic mature, improve nitrogen use efficiency as well as other measures such as those under GAEC 2 and 9. The issue of methane as a GHG is a serious concern and challenge to achieve 2030 agreements as well as those to be announced in the Sectoral Climate Targets. Depending on uptake this may contribute to AQ CC SEOs in particular but increasing numbers of livestock as identified by the EPA will not make this achievable over the short to medium term.	No
Training to implement Suckler Carbon Efficiency Programme	No direct landuse effects identified.	No

Mitigation and Monitoring

On foot of the assessment of the draft CAP Strategic Plan 2023-2027, the SEA ER and NIS have proposed mitigation measures and recommendations. These are further supported by measures from other relevant plans such as the 3rd River Basin Management Plan (draft) and Food Vision 2030.

The mitigation measures include two overarching measures to promote the right measure in the right place through learning from pilot schemes and other agri environmental schemes as well as a measure to improve monitoring and allow for collaboration and oversight to ensure positive effects are captured as well as corrective action should adverse effects be captured.

Additional mitigation measures arising from statutory consultation.

Following the public consultation period from 8th November to 8th December 2021, a number of mitigation measures to strengthen environmental protection were added.

The headings of the mitigation measures are presented below:

- Mitigation Measure 1: Aim for all farms to support right measure, right place over plan lifetime
- Mitigation Measure 2: Oversight and monitoring: Monitoring Committee
- Mitigation Measure 3: Collaborate and engage with NPWS to address monitoring on permanent grassland
- Mitigation Measure 4: Capacity Building and Training
- Mitigation Measure 5: Eco Scheme Agricultural practice 3: Limiting chemical nitrogen usage
- Mitigation Measure 6 from Food Vision 2030 Capital Investment Scheme
- Mitigation Measure 7: AECM

Additionally, a number of relevant mitigation measures from other national plans and programmes have been identified and these apply as appropriate within the relevant legal and regulatory framework to the CAP Strategic Plan 2023 – 2027. Any statutory requirements arising from the final River Basin Management Plan and Nitrates Action Plan will be adopted as practice as relevant and applicable in the implementation of the CSP 2023-2027.

Further detail can be found in Chapter 9 of the SEA ER.

Monitoring

Cross reporting and cooperation between statutory authorities (DAFM, Department of Housing, Local Government and Heritage (National Parks and Wildlife Service) and Local Authorities will be enhanced to facilitate effective controls and follow up actions, as appropriate.

- Greater emphasis on targeting controls to ensure effectiveness. This will be achieved by consideration of new information relevant to the SMRs and GAECs, evaluation of the outcome of past controls and an effective risk analysis procedure in the selection process.
- Where feasible, checks by monitoring will be introduced to enhance the number of farmers subject to controls.
- Remedial actions will form part of the control process

A monitoring programme in line with the requirements of the SEA Directive has been developed and this is shown overleaf. It seeks to address significant environmental issues identified through the SEA and AA assessment processes. It also seeks to use where relevant CAP Strategic Plan monitoring requirements which are a new feature of the CAP Strategic Plan. One of the most significant developments in the 2023-2027 CAP programming period is the New Delivery Model (NDM), a new governance structure that will shift the present compliance-based approach to a performance-based approach. The next CAP programming period (2023-2027) will be monitored and evaluated using the new Performance Monitoring and Evaluation Framework (PMEF). The NDM will demand a robust governance system as is currently the case; but in addition, will require a reconciliation of expenditure incurred with impacts achieved, through a transparent performance reporting framework based on the reporting of outputs and results with milestones and programme targets.

TABLE 7 SEA MONITORING

SEA Significant Issue	Monitoring indicators	Suggested Data sources/indicators. CAVEAT: Suggested datasets becomes available.
Biodiversity, Flora and Fauna		
Addressing habitat fragmentation, decline and loss of connectivity.	R.31 Preserving habitats and species: Share of utilised agricultural area (UAA) under supported commitments supporting biodiversity conservation or restoration including high-nature-value farming practices R.32 Investments related to biodiversity: Share of farms benefitting from CAP investment support contributing to biodiversity % of sites in favourable or improving condition: % of species in favourable conservation status over plan duration R.33 Improving Natura 2000 management: Share of total Natura 2000 area under supported commitments R.34 Preserving landscape features: Share of Utilised Agriculture Area (UAA) under supported commitments for managing landscape features, including hedgerows and trees	EPA ESM and datasets DAFM Ammonia; MARSH Mapping Ammonia Risk on Sensitive Habitats (MARSH) published in the Science of the Total Environment WFD indicators monitored under the WFD monitoring programme for 2022-2027 period. WFD data – and reporting on Areas for Action High status water bodies – reporting Riparian buffers min 3m and measuring these through LPIS and on ground and EIPs and AECMS
Impact on water dependant / hydrologically connected European sites from CAP Pillar 1 and II interventions	R.21 Protecting water quality: Share of utilised agricultural area (UAA) under supported commitments for the quality of water bodies O.1: Number of European Innovation Partnership (EIP) operational group projects (EIP Stream B)	DAFM
Effects of ammonia on habitats and water	Average site ammonia deposition rates in comparison with critical level I.14 and C.47 Ammonia emissions from agriculture	
Farmland and Upland Birds and Waders	I.19 / C.36: Farmland Bird Index O.1: Number of European Innovation Partnership (EIP) operational group projects (EIP Stream B) R.31 Preserving habitats and species: Share of utilised agricultural area (UAA) under supported commitments for supporting biodiversity conservation or restoration including high-nature-value farming practices	DAFM

Population and Human Health		
Generational Renewal	R.36 Generational renewal: Number of young farmers benefitting from setting up with support from the CAP, including a gender breakdown O.30 Number of supported operations or units for generational renewal (excluding setting-up support)	Institute of Public Health HSE Health and Safety Authority CSO Teagasc Family Farm Survey EPA ESM and datasets DAFM
Farm Income	I.26: Distribution of CAP support I.3 / C.25 Agricultural factor income C.27: Farm income R.4 Linking income support to standards and good practices: Share of utilised agricultural area (UAA) covered by income support and subject to conditionality R.6. Redistribution to smaller farms: Percentage of additional direct payments per hectare for eligible farms below average farm size (compared to average) R.7: Enhancing support for farms in areas with specific needs: Percentage additional support per hectare in areas with higher needs (compared to average) R.8 Targeting farms in specific sectors: Share of farms benefitting from coupled income support for improving competitiveness, sustainability or quality O.4: Number of hectares benefitting from basic income support O.5: Number of beneficiaries or hectares benefitting from payments for small farmers O.6: Number of hectares benefitting from complementary income support for young farmers O.7: Number of hectares benefitting from complementary redistributive income support	

Rural enterprise and diversification Access to quality food/ welfare/ organics	R.1 Enhancing performance through knowledge and innovation: Number of persons benefitting from advice, training, knowledge exchange, or participating in European Innovation Partnership (EIP) operational groups supported by the CAP in order to enhance sustainable economic, social, environmental, climate and resource efficiency performance Number of rural enterprises supported via LEADER R.10 Better supply chain organisation: Share of farms participating in producer groups, producer organisations, local markets, short supply chain circuits and quality schemes supported by the CAP R.38 LEADER coverage: Share of rural population covered by local development strategies R.37: Growth and jobs in rural areas: New jobs supported in CAP projects Number of training courses relating to environment including climate change supported by CAP and LEADER. O.17 Number of hectares and number of other units benefitting from support for organic farming O.18 Number of livestock units (LU) benefitting from support for animal welfare, health or increased biosecurity measures R.29: Development of organic agriculture. Share of utilised agricultural area (UAA) supported by the CAP for organic farming, with a split between maintenance and conversion I.28 / C.48 Antimicrobials Sales/use of antimicrobials in food producing animals I.18 /C.49 Risk, use and impacts of pesticides
Water body and water quality statistic relating to blue flat status, WFD data, shellfish areas, etc including boil notice	Traditional skills courses supported by LEADER R.21 Protecting water quality: Share of utilised agricultural area (UAA) under supported commitments for the quality of water bodies R.22 Sustainable nutrient management: Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management I.15 / C.39 Water quality (including, 1.Gross nutrient balance – nitrogen, 2.Gross nutrient balance – phosphorus and 3. Nitrates in groundwater

	Water Framework Directive Data on surface, ground, transitional waters. Number of private wells with e coli/ pesticide traces (not annual) I	
Soil and Geology		
Change in wetland and agricultural cover	C.05 Land cover R.12 Adaptation to climate change: Share of utilised agricultural area (UAA) under supported commitments to improve climate adaptation	CORINE Soil Observatory data (es 2020) Teagasc Tellus GSI DAFM EPA research projects
Peatland soils status	R.14 Carbon storage in soils and biomass: Share of utilised agricultural area (UAA) under supported commitments to reduce emissions or to maintain or enhance carbon storage (including permanent grassland, permanent crops with permanent green cover, agricultural land in wetland and peatland) R.12 Adaptation to climate change: Share of utilised agricultural area (UAA) under supported commitments to improve climate adaptation R.33 Improving Natura 2000 management: Share of total Natura 2000 area under supported commitments	Ecosystem services mapping EPA ESM and datasets
Fertiliser use kg/hectare and recycling of nitrogen	Reductions in organic and inorganic fertiliser applications particularly in intensive farms (livestock and arable) R.22 Sustainable nutrient management: Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management	
Soil quality	R.22 Sustainable nutrient management: Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management R.24 Sustainable and reduced use of pesticides Share of utilised agricultural area (UAA) under supported specific commitments which lead to a	

	sustainable use of pesticides in order to reduce risks and impacts of pesticides such as pesticides leakage R.19 Improving and protecting soils: Share of utilised agricultural area (UAA) under supported commitments beneficial for soil management to improve soil quality and biota (such as reducing tillage, soil cover with crops, crop rotation included with leguminous crops)	DAFM
Soil organic matter	Levels of anthropogenic N in estuaries R.14 Carbon storage in soils and biomass R.22 Sustainable nutrient management: Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management	
Water Resources		
Surface water body ecological status	% in good or high status R.21 Protecting water quality: Share of utilised agricultural area (UAA) under supported commitments for the quality of water bodies R.22 Sustainable nutrient management Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management % of waterbodies failing WFD targets.	DAFM 5th NAP PIP data at catchment level on P and N EIP, Cooperation Where water bodies are failing to meet at least good status or are showing deterioration of status this will be investigated with reference to ongoing programme of measures under RBMP rollout. data source: EPA and Marine Institute
Agricultural pollution levels in rivers	I.13/C.41: Soil erosion by water: Percentage of agricultural land in moderate and severe soil erosion R.22 Sustainable nutrient management: Share of utilised agricultural area (UAA) under supported commitments related to improved nutrient management % reduction in nitrogen losses to waters from agriculture.	
Impacts on water quality as a result of sectoral activities.	I.15: / C.39 Water quality (including, 1.Gross nutrient balance – nitrogen, 2.Gross nutrient balance – phosphorus and 3.Nitrates in ground water. R.21 Protecting water quality: Share of utilised agricultural area (UAA) under supported commitments for the quality of water bodies	

Achieving Good ecological status by 2027 in line with WFD	R.21 Protecting water quality: Share of utilised agricultural area (UAA) under supported commitments for the quality of water bodies R.33 Improving Natura 2000 management: Share of total Natura 2000 area under supported commitments Status of water bodies – compliance with the environmental objective under WFD and MSFD as appropriate.	
Climatic Factors and Air Quality		
Reduce GHG emissions **Reduce ammonia emissions year on year under National Emissions Ceiling Directive, Ireland has an ammonia target of 107,500 tonnes in 2030.**	R.14 Carbon storage in soils and biomass: Share of utilised agricultural area (UAA) under supported commitments to reduce emissions or to maintain or enhance carbon storage (including permanent grassland, permanent crops with permanent green cover, agricultural land in wetland and peatland) GHG Annual recorded sectoral emission statistics R.20 Improving air quality: Share of utilised agricultural area (UAA) under supported commitments to reduce ammonia emission Total fertiliser use/application Chemical nitrogen use: This must be reduced to a target level of 350,000 tonnes by 2025 Cumulative increase in of organic soil rewetting per year [data source: DHLGH]. I.11/ C.40 Soil organic carbon in agricultural land GHG Annual recorded sectoral emission statistics I.10 / C.44 Greenhouse gas) emissions from agriculture C.23 Livestock units C.24: Livestock density Biogenic methane reduction of a minimum of 10% by 2030;	DAFM GHG reporting (EPA) Fertiliser Register

Atmospheric concentrations of key agricultural pollutants	Reduction of ammonia emissions to below 107,500t by 2030; R.20 Improving air quality: Share of utilised agricultural area (UAA) under supported commitments to reduce ammonia emission I.14 C.47 Ammonia emissions from agriculture O.14: Number of hectares (excluding forestry) or number of other units covered by environmental or climate-related commitments going beyond mandatory requirements Annual average background concentrations of NOx, NMVOC, particulates and ammonia at locations recording these parameters. R.14 Carbon storage in soils and biomass: Share of utilised agricultural area (UAA) under supported commitments to reduce emissions or to maintain or enhance carbon storage (including permanent grassland, permanent crops with permanent green cover, agricultural land in wetland and peatland)	
Landscape		
Loss of agricultural landscape character **Loss of agricultural landscape connectivity** **Loss of traditional /vernacular agricultural features**	Number of local LEADER funded local landscape O.31: Number of supported local development strategies (LEADER) or preparatory actions Sustainable Farm plans-landscape measures R.34: Preserving landscape features: Share of utilised agricultural area (UAA) under supported commitments for managing landscape features, including hedgerows and trees Number of Catchment/landscape Cooperation Projects R.28 Environmental or climate-related performance through knowledge and innovation: Number of persons benefitting from advice, training, knowledge exchange, or participating in European Innovation Partnership (EIP) operational groups supported by the CAP related to environmental or climate-related performance O.1 Number of European Innovation Partnership (EIP) operational group projects Eco scheme tree planting measures O.8: Number of hectares or livestock units benefitting from eco-schemes Uptake of Eco-scheme Space for Nature agricultural practice	DAFM 2021 Landscape Classification Typology GIS A landscape classification map of Ireland and its potential use in national land use monitoring - ScienceDirect

	O.12: Number of hectares benefitting from support for areas facing natural or other specific constraints, including a breakdown per type of areas I.21/C.21: Agricultural land covered with landscape features Recognition of local landscape in marketing of foods/food production	
Cultural Heritage		
Loss of vernacular features **Impact on setting of archaeological and built heritage features** **Adaptive reuse of farm and rural buildings**	Number of AECM farmers/EIP/Cooperation with archaeological measures and support by archaeologist R.38 LEADER coverage: Share of rural population covered by local development strategies O.31: Number of supported local development strategies (LEADER) or preparatory actions O.1 Number of European Innovation Partnership (EIP) operational group projects	DAFM/DRCD
Material Assets		
Improving energy efficiency at farm level (energy, fertiliser, water)	EPA Smart Farming scheme numbers of updates. R.15 Renewable energy from agriculture, forestry and from other renewable sources: Supported investments in renewable energy production capacity, including bio-based (in MW) O.20: Number of supported on-farm productive investment operations or units R.16 Investments related to climate: Share of farms benefitting from CAP investment support contributing to climate change, mitigation and adaptation, and to the production of renewable energy or biomaterials I.12/C.42: Sustainable production of renewable energy from agriculture and forestry C43: Energy use in agriculture, forestry and food industry	SEIA data DAFM LUCLUF reporting
Reducing waste (including hazardous)	Availability of recycling schemes available to farmers and waste streams from farm activities.	